ISSN (print) 0093-4666 © 2014. Mycotaxon, Ltd. ISSN (online) 2154-8889

MYCOTAXON

http://dx.doi.org/10.5248/127.33

Volume 127, pp. 33–37 *January–March 2014*

Conidial fungi from the semiarid Caatinga biome of Brazil: a new species of *Pseudoacrodictys*

Patrícia Oliveira Fiuza[1], Luis Fernando Pascholati Gusmão[1]*, Alisson Cardoso Rodrigues da Cruz[1], & Rafael F. Castañeda-Ruiz[2]

[1]*Departamento de Ciências Biológicas, Laboratório de Micologia, Universidade Estadual de Feira de Santana, BR116 KM03, 44031-460, Feira de Santana, Brazil*

[2]*Instituto de Investigaciones Fundamentales en Agricultura Tropical 'Alejandro de Humboldt' (INIFAT), Académico Titular de la Academia de Ciencias de Cuba, Calle 1 Esq. 2, Santiago de Las Vegas, C. Habana, Cuba, C.P. 17200*

*Correspondence to: *lgusmao@uefs.br*

Abstract — *Pseudoacrodictys magnicornuata* sp. nov., collected on decaying twigs in the semiarid region northeastern Brazil, is described and illustrated. It is distinguished by turbinate, sub-napiform, subglobose to irregular, dictyoseptate, golden brown, brown to dark brown conidia with 7–35 corniform cellular appendages that are 1–2(–4) circinate and arranged around the conidial margin or apex.

Key words — asexual fungi, taxonomy, *Acrodictys*-like

Introduction

Baker & Morgan-Jones (2003) introduced the genus *Pseudoacrodictys* for seven species previously described under a broad generic concept of *Acrodictys*. These are distinguished from *Acrodictys* by more commonly indeterminate, cylindrical, doliiform to subulate enteroblastic percurrent elongations of the conidiogenous cells and schizolytic conidial secession; they produce conidia that are holoblastic, solitary, acrogenous, subglobose to broadly pyriform to turbinate or irregular, obscurely dictyoseptate and bear one to several (a)septate, somewhat hypha-like, straight, undulate, involute to uncinate cellular appendages. Four other species have also been described: *P. dimorphospora* Somrith. & E.B.G. Jones, *P. aquatica* R.F. Castañeda et al., *P. fici* Y.D. Zhang & X.G. Zhang, and *P. steviae* Rashm. Dubey & A.K. Pandey bis (Castañeda Ruiz et al. 2010, Dubey & Pandey 2012, Somrithipol & Jones 2003, Zhang et al. 2011). Recently an interesting *Pseudoacrodictys* specimen from Brazil,

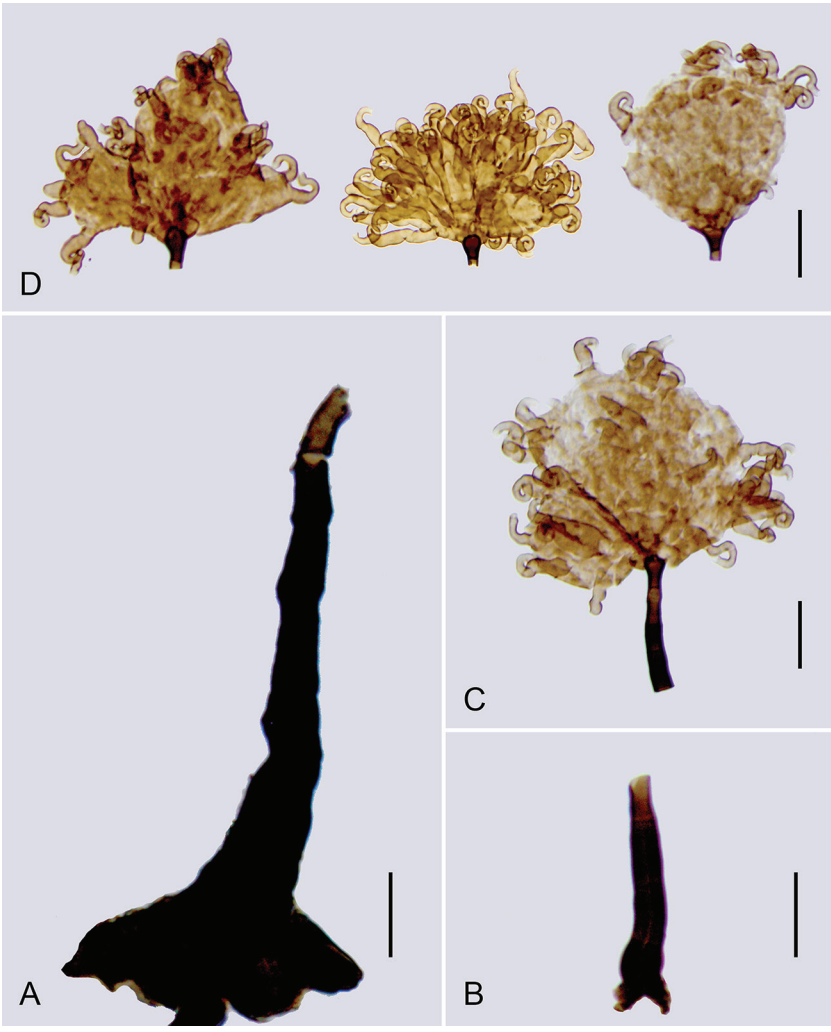

Fig. 1. *Pseudoacrodictys magnicornuata* (ex HUEFS 194255). A–B. Conidiophores and conidiogenous cells. C. Conidiogenous cell and conidium. D. Conidia. Scale bars: A–B = 10 µm; C–D = 20 µm.

morphologically distinct from all previously described species, has been discovered and is here described as new.

During several July 2007–May 2009 expeditions through "Serra da Jibóia" in the semiarid region northeastern Brazil, samples of lignified plant debris were collected, taken to the laboratory, and treated according to Castañeda

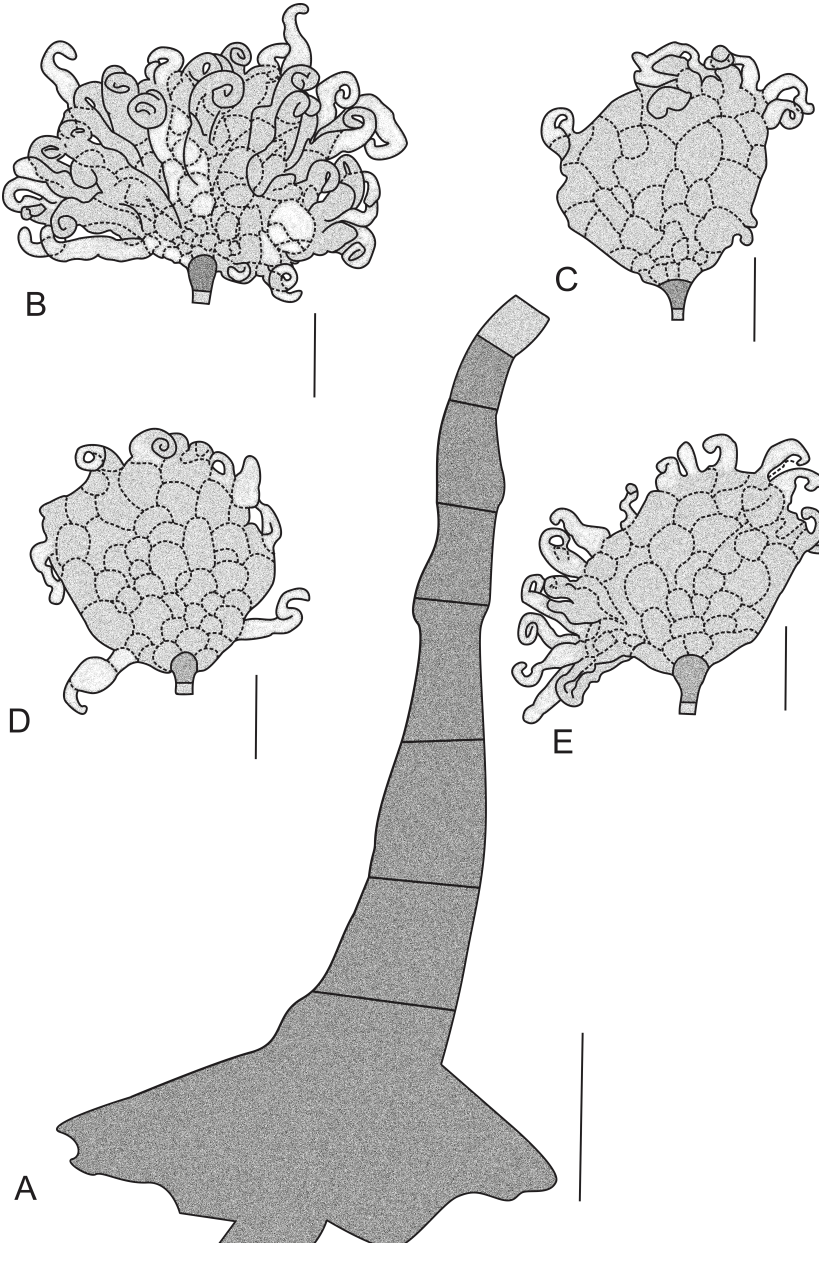

Fig. 2. *Pseudoacrodictys magnicornuata* (ex HUEFS 194255).
A. Conidiophore. B–E. Conidia. Scale bars: A = 15 µm; B–D = 20 µm.

Ruiz (2005). Mounts were prepared in PVL (polyvinyl alcohol, lactic acid, and phenol) and measurements made at a magnification of ×1000. Micrographs were obtained with an Olympus microscope (model BX51) with bright field and Nomarski interference optics. The type specimen of the new species is deposited in the Herbarium of "Universidade Estadual de Feira de Santana" (HUEFS).

Taxonomy

Pseudoacrodictys magnicornuata Fiuza, Gusmão & R.F. Castañeda, **sp. nov.**

Plate. 1, 2

MycoBank MB805080

Differs from other *Pseudoacrodictys* species by its multi-appendiculate conidia with corniform, circinate, cellular appendages arising around the margin or towards the apex of the conidium.

Type: Brazil, Bahia, Santa Terezinha, Serra da Jibóia, 12°51′23.1″S 39°28′ 33″W, on decaying twigs, 11-V-2009, coll. P.O. Fiuza- (**Holotype**: HUEFS 194255).

Etymology: Latin, *magni-* meaning major, large + *-cornuata* for the coiled or circinate horn-shaped cellular conidial appendages.

Colonies on the natural substratum effuse, brown to black. Mycelium mostly immersed. Conidiophores distinct, single, erect, straight or flexuous, unbranched, 3–5-septate, smooth, dark brown to black. Conidiogenous cells monoblastic, integrated, indeterminate, with 3–5 subulate enteroblastic percurrent elongations, smooth, dark brown. Conidial secession schizolytic. Conidia solitary, turbinate, sub-napiform, subglobose to irregular, finely ruminate dictyoseptate, golden brown, brown to dark brown, 50–87 × 50–67 µm, multi-appendaged, with 9–35 cellular appendage, corniform, 1–2 (–4)-times coiled or circinate, each appendage 1–4-septate, brown to pale brown, 18–50 × 4.0–7.5 µm, scattered around the margin or towards the apex of the conidium.

Note: The conidial appendages of *Pseudoacrodictys magnicornuata* are unique among *Pseudoacrodictys* species (Table 1) in being circinate.

Acknowledgments

The authors express their sincere gratitude to Dr. De-Wei Li and Prof. Dr. Bryce Kendrick for their critical review of the manuscript. They are grateful to the "Fundação de Amparo à Pesquisa do Estado da Bahia (FAPESB)" for financial support and the "Programa de Pós-graduação em Botânica – PPGBot/UEFS" and also acknowledge support provided by "Programa Ciência sem Fronteiras" (proc. 452967/2013-9). RFCR is grateful to Cuban Ministry of Agriculture and "Programa de Salud Animal y Vegetal," project P131LH003033 Cuban Ministry of Science, Technology and Environment for facilities. LFPG is grateful to CNPq (proc. 305413/2011-2). We acknowledge the

Table 1. *Pseudoacrodictys* species with appendaged conidia

Species	Conidial shape	Conidial size (µm)	Appendages		
			Number	Length	Shape
P. appendiculata	Pyriform to turbinate	27–45 × 22–30	2–3	56 µm	Subulate
P. corniculata	Globose, subglobose to broadly pyriform	19–35 × 17–30	3–4	8–20 µm	Subulate and curved
P. eickeri	Pyriform to turbinate	28–64 × 22–42	3–4	7–12 µm	Cylindrical
P. fici	Subglobose, sometimes lobed	35–52 × 22–44	2–4	30–70 µm	Cylindrical
P. magnicornuata	Turbinate, sub-napiform, subglobose, or irregular	50–87 × 50–67	9–35	18–50 µm	Circinate
P. viridescens	Globose, subglobose to broadly pyriform	62–80 × 40–60	4–6	8–20 µm	Cylindrical

assistance provided by Dr. P.M. Kirk and Drs. V. Robert and G. Stegehuis through the IndexFungorum and Mycobank websites. Dr. Lorelei L. Norvell's editorial and Dr. Shaun Pennycook's nomenclatural reviews are greatly appreciated.

Literature cited

Baker WA, Morgan-Jones G. 2003. Notes on hyphomycetes. XCI. *Pseudoacrodictys*, a novel genus for seven taxa formerly placed in *Acrodictys*. Mycotaxon 85: 371-391.

Castañeda Ruiz RF. 2005. Metodología en el estudio de los hongos anamorfos. Anais do V Congresso Latino Americano de Micología. Brasilia: 182-183.

Castañeda Ruiz RF, Heredia Abarca G, Arias Mota RM, Stadler M, Saikawa M, Minter DW. 2010. *Anaselenosporella sylvatica* gen. & sp. nov. and *Pseudoacrodictys aquatica* sp. nov., two new anamorphic fungi from Mexico. Mycotaxon 112: 65-74. http://dx.doi.org/10.5248/112.65

Dubey R, Pandey AK. 2012. *Pseudoacrodictys steviae* – a new generic and species record for India. Journal of Mycology and Plant Pathology 42(2): 251-253.

Somrithipol S, Jones EBG. 2003. *Pseudoacrodictys dimorphospora* sp. nov., a new graminicolous hyphomycete from Thailand. Sydowia 55(2): 365-371.

Zhang YD, Ma J, Wang Y, Ma LG, Castañeda Ruiz RF, Zhang XG. 2011. New species and record of *Pseudoacrodictys* from southern China. Mycological Progress 10: 261-265. http://dx.doi.org/10.1007/s11557-010-0696-z